| | | | | focus (mil) | 9 | 65 |
|------------------------|------------------------|----------------------------------|----------------|---|---------------|---------|
| | | | Spiral Params. | pitch | 15 28 2 15.25 | 59 |
| | | | iral Pa | rev | 2 | 1 |
| 1 | | : | ds | þi | 28 | 15 31 1 |
| Example 7=355 nm Laser | | Step 2=Thermount E220 from Nelco | | Eff. spot (μm) | \$1 | 15 |
| | | | | # of passes | 1 | 2 |
| | Step $1 = 12 \mu m$ Cu | | | Power (mW) Bite Size (μm) # of passes Eff. spot (μm) id rev pitch focus (mil) | 4.36 | 19.36 |
| | | | | Power (mW) | 400 | 001 |
| | | | | Rep Rate (kHz) | 1.1 | 0.267 |
| | | | | Via Size (μm) Step Speed (mm/sec) | 4.8 | 5.13 |
| | | | | Step | 1 | 2 |
| | | | | Via Size (μm) | 12 | 140 |

Fig. 19

| Step 2 | | |
|-------------|---------------------------------------|--|
| = 50 μm Spe | Step 2=50 μ m Speedboard N (PTFE) | |
| | Step 2 | |

| | | | | id rev pitch focus (mil) | 0 | 0 |
|------------------------|-----------------|--|----------------|--|---------|-----|
| | | | rams. | pitch | 20 | |
| | | | Spiral Params. | rev | 35 10 2 | |
| | | | dS | | 10 | |
| Example 9=266 nm Laser | | Step 2=50 µm Duramid Aramid Reinforced Epoxy | | Eff. spot (μm) | 38 | 1 |
| | | | | # of passes | I | 1 |
| | Step 1=15 µm Cu | | | Power (mW) Bite Size (μ m) # of passes Eff. spot (μ m) | 1 | 1.5 |
| | | | | Power (mW) | 051 | 008 |
| | | | | Rep Rate (kHz) | \$ | 3.2 |
| | | | | Via Size (µm) Step Speed (mm/sec) | 5 | 4.8 |
| | | | | Step | 1 | 2 |
| | | | | Via Size (μm) | 160 | 160 |

Fig. 21

| | | | , | | | |
|-------------------------|-----------------|--------------------------------------|----------------|--|-------|------|
| | | | | pitch focus (mil) | 0 | 0 |
| | | | Spiral Params. | pitch | 20 | |
| | | | iral P | id rev | 2 | |
| | | | S | | 35 10 | |
| Example 10=266 nm Laser | | Step 2=50 µmGore Speedboard N (PTFE) | | Eff. spot (μm) | 35 | 1 |
| | | | | # of passes | ī | 1. |
| | Step 1=15 μm Cu | | | Power (mW) Bite Size (μm) # of passes Eff. spot (μm) | 1 | 1.2 |
| | | | | Power (mW) | 051 | 508 |
| | | | | Rep Rate (kHz) | \$ | 3.75 |
| | | | | Via Size (μm) Step Speed (mm/sec) | 5 | 4.5 |
| | | | | Step | -1 | 2 |
| | | | | Via Size (μm) | 091 | 091 |